

## METHODS AND SYSTEMS FOR PERFORMING CREDIT TRANSACTIONS WITH A WIRELESS DEVICE

### BACKGROUND OF THE INVENTION

[0001] This application relates generally to use of wireless technology. More specifically, this application relates to performing transactions with a wireless device.

[0002] In recent years, there has been considerable market pressure driving the development of more versatile ways of performing transactions. This is evident in the development of transaction products that supplement traditional credit cards, such as debit cards, stored-value cards, private-label cards, loyalty-program cards, prescription cards, insurance cards, and the like. This development has been coupled with increasing pressures to address the potential for fraud, which has become of greater concern with the proliferation of new transaction products and with steadily more sophisticated techniques for committing fraud.

[0003] One example of the manner in which transactions are currently executed is illustrated with a credit-card transaction in connection with **FIG. 1**. A credit card may be issued to a customer by a financial institution such as a bank and typically displays a logo for an association that implements rules that govern aspects of use of the card. Account information is usually printed on the face of the card, specifying an account number and name of an authorized holder of the card; this information is also stored together with additional information on a magnetic stripe that is usually affixed to the back of the card. When the cardholder wishes to execute a transaction, such as a financial transaction for the purchase of goods and/or services, he presents the card **120** to a clerk at a merchant location, who swipes the card through a magnetic-stripe reader comprised by a point-of-sale device **108**. Multiple point-of-sale devices **108** may have been provided at a variety of locations by an acquirer, who acts as an intermediary between merchants and the issuer financial institutions. As an intermediary, the acquirer coordinates transaction routing and performs a variety of backend processes.

[0004] The point-of-sale device **108** typically initiates a dialup connection to an acquirer system **112** through a network **104**. A packet of information that includes information read from the magnetic stripe of the card, a merchant identifier, the date, and transaction amount are forwarded by the point-of-sale device **108** through the network **104** to the acquirer system **112**. The acquirer system **112** may store some of the information and sends an authorization request to the issuing financial institution **116**, which may be identified from a portion of the account number read from the magnetic stripe. The transaction is authorized or denied depending on such factors as the validity of the cardholder name, the validity of the card number, the level of available credit in comparison with the transaction amount, and the like. If authorized, an authorization code is routed back through the acquirer system **112**, which captures additional information and forwards the authorization code back to the originating point-of-sale device **108** so that the transaction may be completed. Periodically, such as at the end of every day, the transactions are settled by the acquirer initiating funds transfers that fund merchant bank accounts with total transaction amounts that may have resulted from multiple transactions by multiple customers.

[0005] Other types of cards may operate with similar structures, although the details for each type of card are different. For example, use of a debit card typically requires that the customer provide a personal identification number ("PIN"), which must be validated before any authorization for the transaction can be provided. Authorization usually depends on the current level of funds actually in the identified account rather than on a credit level, and funds transfer is usually executed substantially contemporaneously with providing the authorization rather than performing periodic settlement. Other types of cards may use arrangements that have similar differences in their particulars.

[0006] The proliferation of various types of transaction instruments has resulted in consumers limiting their use of some instruments, in part because there is only a limited amount of space in each person's wallet or purse to carry the instruments and because of concerns that theft of the wallet or purse would result in loss of all the instruments. There is accordingly a need in the art for improved methods and systems for performing transactions.

### BRIEF SUMMARY OF THE INVENTION

[0007] Embodiments of the invention thus make use of a wireless device, such as a cellular telephone, that may hold information for one or more accounts to execute transactions. The wireless device exchanges information wirelessly with a point-of-sale device in performing transactions.

[0008] Thus, in a first set of embodiments, a method is provided of initiating a wireless device for use in performing transactions. A wireless communication is received from the wireless device at a host system. The wireless communication identifies a financial account to be authorized for use in supporting transactions. A location-positioning signal is received at the host system. The location-positioning signal identifies a geographical location for the wireless device at a time when the wireless communication is received at the host system. The geographical location is determined from the location-positioning signal. An authorized address for the financial account is retrieved from a storage device in communication with the host system. It is verified that the geographical location is at a position substantially the same as the authorized address. Information defining an account transaction mechanism is transmitted wirelessly to the wireless device. The information includes an identification of the financial account.

[0009] In some such embodiments, the wireless device comprises a cellular telephone, in which case the wireless communication may comprise a cellular telephone call from the cellular telephone. In one embodiment, biometric information read from a person initiating the wireless communication is received at the host system from the wireless device and a biometric record associated with the financial account is retrieved from the storage device. The biometric information is confirmed to be consistent with the biometric record to identify the person as authorized under the financial account. In another embodiment, biometric information read from a person initiating the wireless communication is also received at the host system, and is stored on the storage device. In further embodiments, a second communication may be received from the wireless device at the host system, with the second communication including an encryption key that is stored on the wireless device. In an alternative